

CLAIMS

(0035) What I claim as my invention is:

- (0036) 1. A graywater diverter vessel assembly in accordance with this invention, is a device which comprises a side vessel connected to a valve diversion assembly, and wherein the valve diversion assembly incorporates a valve and provides vertical inlet and outlet connection sockets so the valve diversion assembly can be connected into a vertical wastewater pipe and have two remaining side connection sockets for connection to the accompanying side vessel, and wherein the side vessel is closed except it has a removable gas tight access for servicing a removable graywater mesh filter and has three wastewater pipe connection socket points which include an upper graywater in-flow connection point for connection to the valve diversion assembly's upper side wastewater pipe connection socket and two out-flow wastewater pipe connection points of which the first is the graywater over-flow point for connection back to the valve diversion assembly's lower side wastewater pipe connection socket and situated lower than the side vessel's graywater inflow point and the second of the two outflow points is a filtered graywater outlet point located near the base of the vessel and below the removable graywater mesh filter for filtered graywater to exit the vessel for reuse.
- (0037) 2. A graywater diverter vessel assembly as claimed in claim 1, wherein the valve diversion assembly's upper side branch wastewater pipe connection socket is such that graywater will not flow through the connection when graywater reuse is not required and the valve is opened for graywater to flow to sewer or the onsite wastewater system, and wherein the side vessel's graywater overflow wastewater pipe connection point is positioned at a lower level and to one side of the wastewater inflow pipe connection point such that graywater entering the vessel will not overflow back to the sewer except when a blockage restricts the intended free flow of graywater through and out of the side vessel for reuse.

(0038) 3. A graywater diverter vessel assembly as claimed in claim 1, wherein it is installed into a vertical wastewater pipe above ground in a position so the graywater in-flow and over-flow connection points of the side vessel are set at a level lower than the water trap of the lowest plumbing fixture connected to the graywater diverter vessel assembly and so the graywater overflow connection point of the side vessel is at a height above the drainage plumbing system's overflow relief gully or disconnecter trap to comply with prevailing plumbing rules.

(0039) 4. A graywater diverter vessel assembly as claimed in claims 1-3 wherein the preferred embodiment has a cylindrical side vessel with three wastewater pipe connection points, closed base, mesh filter bracket and access lid preferably manufactured from suitably moulded ultra-violet resistant PVC or similar plastic components that are glued, screwed or welded together, and has a removable graywater mesh filter preferably manufactured from stainless steel or other suitable corrosion resistant material, and has two seals manufactured from rubber or similar material for use as the access lid's gas seal and the removable graywater mesh filter's outer rim water seal, whereas, the remainder of components used to assemble the graywater diverter vessel assembly, including wastewater pipe and junctions and valve are readily available from approved wastewater plumbing component suppliers and manufactured preferably and preferably made from ultra-violet resistant PVC or similar materials, so they may be readily screwed or glued together with the cylindrical vessel to construct the graywater diverter vessel assembly device.

(0040) 5. A graywater diverter vessel assembly substantially as herein described with reference to the accompanying drawings.